VERNON RANCHETTES, LOT 1, AP (SCUSSEL) FOUR-LOT MINOR SUBDIVISION

STAFF REPORT FOR PLANNING BOARD

CASE PLANNER:

Tristan Riddell.

REVIEWED AND

APPROVED BY:

Renee Van Hoven

PUBLIC HEARINGS,

MEETINGS AND DEADLINES:

Planning Board public hearing:

November 1, 2006

Deadline for PB recommendation to BCC:

December 6, 2006

BCC public meeting (tentative):

9:00am December 12, 2006

Deadline for BCC action (35 working days):

December 26, 2006

APPLICANT / OWNER:

Jeff & Tracy Scussel

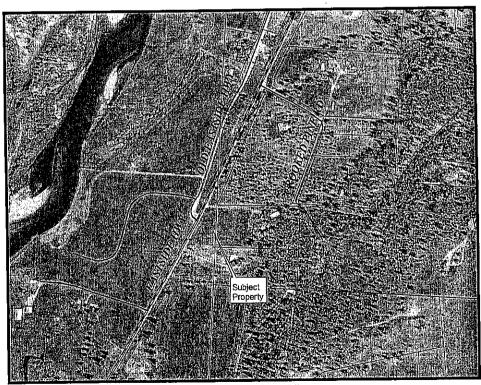
5834 Jones Road Florence, MT 59833

REPRESENTATIVE:

Terry Nelson, with Applebury Survey, (406) 961-3267

LOCATION OF REQUEST: The property is located approximately 6.00 miles north of

Stevensville off Eastside Highway. (Map1)



Map 1: Location Map

(Source Data: Ravalli County Planning Department)

LEGAL DESCRIPTION

OF PROPERTY:

Tract A, COS 630 being a portion of Lot 1, Vernon Ranchettes, located in the SE1/4, Section 25, T10N, R20W and SW1/4, Section 30, T10N, R19W P.M.M., Ravalli County, Montana.

APPLICATION INFORMATION:

The subdivision application was determined complete on September 21, 2006. Agencies were notified of the subdivision and comments received from agencies not included in the application packet are Exhibits A-1 through A-5 of the staff report.

LEGAL NOTIFICATION:

A legal ad was published in the <u>Ravalli Republic</u> on October 17, 2006. Notice of the project was posted on the property and adjacent property owners were notified of the subdivision by certified mail postmarked October 12, 2006. No public comments have been received to date.

DEVELOPMENT PATTERN:

Subject property Residential

North

Large lot residential

South East

Residential Residential

West Residential

RAVALLI COUNTY PLANNING BOARD

NOVEMBER 1, 2006

VERNON RANCHETTES, LOT 1, AP (SCUSSEL) FOUR-LOT MINOR SUBDIVISION

RECOMMENDED MOTION

That the Vernon Ranchettes, Lot 1, AP (Scussel) minor subdivision be **approved**, based on the findings of fact and conclusions of law in the staff report and subject to the conditions in the staff report.

RECOMMENDED MITIGATING CONDITIONS OF APPROVAL

1. A document entitled "Notifications to Future Property Owners" that includes the following notifications shall be included with the submittal of the final plat to the Planning Department and filed with the final plat:

Notification of Proximity to Agricultural Operations. This subdivision is located near existing agricultural activities. Some may find activities associated with normal agricultural activities objectionable and dangerous. (Effects on Agriculture)

Notification of Severe Soils. Within this subdivision there are areas of the property identified as potentially having soils rated as severe for road and building sites. The approximate locations of these areas can be found on a reduced copy of the final plat and descriptions of the severe soils in question which are included as exhibits to this document. (The applicant shall include the exhibits as attachments) (Effects on Public Health and Safety)

Notification of Road Maintenance. Ravalli County, the State of Montana, or any other governmental entity does not maintain the road within this subdivision and, therefore, does not assume any liability for improper maintenance or the lack thereof. A Road Maintenance Agreement was filed with this subdivision and outlines what parties are responsible for road maintenance and under what conditions. (Effects on Local Services)

Limitation of Access Onto State Road. A non-ingress/egress zone exists along Eastside Highway which restricts vehicular access onto this State-maintained road, excepting the approved location for the internal subdivision road. All lots within this subdivision must use the approved access point. This limitation of access may be lifted or amended with approval of the Montana Department of Transportation. (Effects on Local Services and Public Health and Safety)

Notification of Utility Easements. Within this subdivision there are utility easements. No structure shall be allowed to encroach into or set upon the utility easements. The utility easements shall remain unobstructed and accessible at all times. (Effects on Local Services)

Notification of No-Build Zone. A no-build zone is located within a natural drainage that traverses Lots A3 and A4. No building or structure may be constructed or otherwise placed within this no-build zone. (Effects on Natural Environment and Wildlife and Wildlife Habitat)

 Protective covenants, including the following provisions, shall be filed with the final plat: Living with Wildlife. (See Exhibit A-1 for required provisions.) (Effects on Wildlife and Wildlife Habitat)

Waiver of Protest to Creation of RSID/SID. Owners and their successors in interest waive all rights in perpetuity to protest the creation of a city/rural improvement district for any purpose allowed by law, including, but not limited to creating and/or improving a community water or wastewater treatment system and improving and/or maintaining the roads that access the subdivision, including related right-of-way, drainage structures, and traffic control signs. (Effects on Local Services)

Radon Exposure. The owner understands and accepts the potential health risk from radon concentrations, which are presently undetermined at this location. Unacceptable levels of radon can be reduced through building design and abatement techniques incorporated into structures. (Effects on Public Health and Safety)

Primary Heat Source. The primary heat source for any newly constructed residences in this subdivision shall be at least 75% efficient. (Effects on Natural Environment)

Control of Noxious Weeds. Lot owners shall control the growth of noxious weeds on their respective lots. (Effects on Natural Environment)

Lighting for New Construction. Full cut-off lighting shall be required for any new construction within this subdivision. A full cut-off fixture means fixtures, as installed, that are designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the lamps or indirectly from the fixture, are projected below a horizontal plane through the lowest point on the fixture where light is emitted. The source of the light is fully shielded, top and sides, so as not to emit light upwards or sideways, but only allowing light to shine down towards the subject that is to be lighted. Spotlighting of flagpoles shall be permitted. (Effects on Public Health and Safety)

Required Posting of County-Issued Addresses for Lots within this Subdivision. The Three Mile Rural Fire District has adopted the Uniform Fire Code 901.4.4 which requires the lot owners to post County-issued addresses at the intersection of the driveway leading to the primary residence and the road providing access to the lot as soon as construction on the residence begins. (Effects on Local Services & Effects on Public Health and Safety)

Access Requirements for Lots within this Subdivision. The Three Mile Rural Fire District has adopted the Uniform Fire Code. All accesses, including driveways to residences over 150' in length, must have a minimum unobstructed travel surface width of 20', a vertical clearance of 13'6", and be constructed of an all weather surface able to accommodate the weight of a fire truck, approximately 40,000 lbs. to meet requirements of the Uniform Fire Code. Please contact the Three Mile Rural Fire District, 1155 Park Street, Stevensville, Montana, 59833, for further information on the requirements of the Three Mile Rural Fire District and/or the Uniform Fire Code. (Effects on Local Services - Fire Protection & Effects on Public Health and Safety)

Amendment. The covenants filed with the final plat shall state that written governing body approval shall be required for amendments to provisions of the covenants listed above, that are required to be included as a condition of subdivision approval. (Effects on all six criteria)

- 3. The applicant shall include an RSID/SID waiver on the final subdivision plat or a separate document that states the following: Owners and their successors in interest waive all rights in perpetuity to protest the creation of a city/rural improvement district for any purpose allowed by law, including, but not limited to creating and/or improving a community water or wastewater treatment system and improving and/or maintaining the roads that access the subdivision, including related right-of-way, drainage structures, and traffic control signs. (Effects on Local Services)
- 4. The final plat shall show the locations of all utility easements as shown on the preliminary plat. (Effects on Local Services)
- 5. The internal subdivision road shall be labeled as a public road and utility easement on the final plat. (Effects on Local Services)
- 6. The existing access onto Eastside Highway shall be abandoned and all lots within this subdivision shall access directly off Stargaze Court, the internal subdivision road. (Effects on Local Services and Public Health & Safety)
- 7. The final plat shall show a non-ingress/egress zone along the Eastside Highway frontage of this subdivision, excepting the location for the proposed internal road, Stargaze Court. (Effects on Local Services and Public Health and Safety)
- 8. The applicants shall install a stop sign at the intersection of Stargaze Court and Eastside Highway, subject to review and approval of the Planning Department, in consultation with the Road Department. (Effects on Local Services and Public Health and Safety)
- 9. The applicants shall submit letters or receipts from the Lone Rock and Stevensville School Districts showing that an amount per lot (to be recommended by the Planning Board and approved by the Board of County Commissioners (BCC) in consultation with the subdivider and the school districts) contribution was received prior to final plat approval. (Effects on Local Services)
- 10. The applicants shall provide evidence with the final plat submittal that they have applied for County-issued addresses for each lot within this subdivision. (Effects on Local Services & Public Health and Safety)
- 11. With the final plat application, the applicants shall provide a letter from the Three Mile Fire District stating that the applicant has provided the required 1,000 gallons per minute water supply or 2,500 gallons per lot water storage for fire protection for lots within this subdivision. Alternatively, the applicant shall provide evidence of a \$500 per lot contribution paid to the Three Mile Rural Fire District prior to final plat approval. (Effects on Local Services & Public Health and Safety)
- 12. The final plat shall show a 100-foot no-build zone along the natural drainage which traverses the eastern portion of the property, as shown on the preliminary plat. (Effects on Natural Environment and Wildlife and Wildlife Habitat)
- 13. The applicants shall submit a letter from the Ravalli County Road and Bridge Department stating that the applicants have submitted driveway plans with their final grading and

drainage plans showing that the capacity of the natural drainage traversing Lot A4 will be preserved. (Effects on Natural Environment and Wildlife and Wildlife Habitat)

INTRODUCTION

The Vernon Ranchettes, Lot 1, AP four-lot subdivision of 5.04 acres, is located north of Stevensville off Eastside Highway. The property is located within the Three Mile Rural Fire District and the Lone Rock and Stevensville School Districts. The four lots are proposed for single family residential use. The property does not have water rights. The property is approximately ¼ mile to the east of the Bitterroot River and ½ mile to the east of the Lee Metcalf Wildlife Refuge. According to the USGS topographic map, an intermittent stream traverses the eastern portion of the property.

Staff recommends approval of the subdivision proposal.

SUBDIVISION REPORT

COMPLIANCE WITH PRIMARY REVIEW CRITERIA

CRITERION 1: EFFECTS ON AGRICULTURE

Findings of Fact:

1. As noted from a site visit, the property is not currently being used for agriculture.

2. The property is not adjacent to other agricultural properties according to the aerial photo.

3. There are no Prime Farmland Soils or Farmland of Statewide Importance associated with this property according to Appendix K of the Ravalli County Subdivision Regulations (RCSR).

4. The property is located in an area where there is a mix of agricultural and residential uses. To mitigate impacts on nearby agricultural practices, a notification of agricultural operations shall be filed with the final plat and the covenants shall include a provision requiring owners to control domestic pets. (Conditions 1 & 2 - in Living with Wildlife section)

Conclusion of Law:

This subdivision will not have negative impacts on agriculture.

CRITERION 2: EFFECTS ON AGRICULTURAL WATER USER FACILITIES

Findings of Fact:

1. The application states the property does not have water rights.

2. According to the application, there are no irrigation ditches on or within 300 feet of the subject property.

Conclusion of Law:

This subdivision will not have negative impacts on agricultural water user facilities.

CRITERION 3: EFFECTS ON LOCAL SERVICES

Findings of Fact:

1. All lots in the subdivision are proposed to be served by an internal road. The Road and Bridge Department has approved the preliminary road plans. (Exhibit A-4)

2. A General Discharge Permit for stormwater associated with the construction activities from the Montana Department of Environmental Quality (if required), an approach permit approved by the Montana Department of Transportation, a road name petition approved by the Ravalli County GIS Department, final road plans approved by the Ravalli County Road and Bridge Depratment, and engineer certification that the internal road meets county standards are required to be submitted prior to final plat approval.

3. To mitigate impacts on the road system and public health and safety, the applicant shall install a stop sign at the intersection of the internal road and Eastside Highway. (Condition

4. A Road Maintenance Agreement is proposed for the internal subdivision road and is required to be submitted with the final plat application. A notification of the Road Maintenance Agreement shall be included in the Notifications Document. (Condition 1)

5. To limit access onto Eastside Highway and to mitigate impacts on local services, the final plat shall show a non ingress/egress zone along the Eastside Highway road frontage, excepting the approach for the internal road, as approved by the Montana Department of Transportation. A notification of this limitation of access shall also be included in the Notifications Document. (Conditions 1 and 7)

- 6. To mitigate impacts on local services, the internal road shall be labeled as a public road and utility easement. *(Condition 5)*
- 7. Individual wells and septic systems are proposed to serve the lots. (See Natural Environment)
- 8. To mitigate potential impacts of this subdivision on any possible future public water, sewer system, or improvements to the road system, the RSID/SID waiver filed with the final plat shall address these services/facilities. (Conditions 2 & 3)
- 9. Bitterroot Disposal provides service to this site.
- 10. The applicants stated they are willing to make a contribution to the School District, in the amount of \$200 per lot. There is no evidence the school districts have agreed to the offer. To mitigate impacts on local services, the applicants shall submit a letter or receipt from the school districts stating that they have received an amount per lot (to be recommended by the Planning Board and approved by the BCC in consultation with the subdivider and school districts. (Condition 9)
- 11. The subdivision is located within the Three Mile Rural Fire District. The Three Mile Rural Fire District has provided general comments on subdivision proposals, indicating they have adopted a policy which addresses access, posting of addresses, and water supply requirements. Conditions of approval will meet the recommendations of the Three Mile Rural Fire District. (Exhibit A-2) (Conditions 1 and 11)
- 12. Public services are adequate to serve the subdivision.
- 13. The Ravalli County Sheriff's Office provides law enforcement services to this area.

Conclusion of Law:

With the conditions of approval and requirements of final plat approval, impacts of the subdivision on local services will be mitigated.

CRITERION 4: EFFECTS ON THE NATURAL ENVIRONMENT

Findings of Fact:

- Individual wells and wastewater treatment systems are proposed to serve the lots within the subdivision and a Certificate of Subdivision Plat Approval from Montana DEQ has been submitted (Exhibit A-3). As a requirement of final plat approval, the Certificate of Subdivision Plat Approval from Montana DEQ shall be submitted with the final plat materials.
- 2. The property is located about ¼ mile from the Bitterroot River (outside of the floodplain) and less about ½ mile from the Lee Metcalf Wildlife Refuge.
- 3. The USGS topographic map shows an intermittent stream traversing Lots A3 and A4 of the subdivision. The developer is proposing a 100-foot no-build zone centered on what they have labeled as a natural drainage.
- 4. Section 5-8-1(f) of the RCSR states that natural drainages shall be preserved except for necessary crossing. The driveway for Lot A4 will have to cross the natural drainage. The applicants shall submit a letter from the Ravalli County Road and Bridge Department stating that the applicants have submitted driveway plans with their final grading and drainage plans showing that the capacity of the natural drainage traversing Lot A4 will be preserved. (Condition 13)
- 5. In an email date October 24, 2006 (Exhibit A-5), Nathan Lucke of Landworks Consulting & Desingn, Inc. provided written clarification of two possible driveway designs which would preserve the existing capacity of the natural drainage.
- 6. To mitigate impacts on the natural environment, a 100-foot wide no-build zone shall be placed on the final plat, as shown on the preliminary plat, and a notification of the no-build zone shall be included in the Notifications Document. (Conditions 1 and 12)

7. To mitigate air pollution resulting from home heating emissions, protective covenants shall be filed with the final plat stating that the primary heat source for any newly constructed residences must be at least 75% efficient. (Condition 2)

8. An approved noxious weed and vegetation control plan is required to be filed with the final plat. According to MCA 7-22-2152, any person proposing a development that needs state or local approval and that results in the potential for noxious weed infestation within a weed district shall notify the weed board at least 15 days prior to activity. Consequently, 15 days prior to activities requiring a revegetation plan, such as road construction, the plan shall be submitted to the weed board for approval by the board (Condition 2).

Conclusion of Law:

Impacts from this subdivision on the natural environment will be minimized with the requirements of final plat approval and imposition of mitigating conditions.

CRITERION 5: EFFECTS ON WILDLIFE AND WILDLIFE HABITAT

Findings of Fact:

1. The property is not located within the Montana Fish, Wildlife, and Parks (FWP) identified big game winter range and there are no species of special concern listed in the vicinity of the property.

2. FWP requested that living with wildlife provisions be included in the covenants to mitigate

impacts on wildlife and wildlife habitat (Exhibit A-1). (Condition 2)

3. The property is located about 1/4 mile from the Bitterroot River (outside of the floodplain) and

less about ½ mile from the Lee Metcalf Wildlife Refuge.

4. Section 5-8-1(f) of the RCSR states that natural drainages shall be preserved except for necessary crossing. The driveway for Lot A4 will have to cross the natural drainage. The applicants shall submit a letter from the Ravalli County Road and Bridge Department stating that the applicants have submitted driveway plans with their final grading and drainage plans showing that the capacity of the natural drainage traversing Lot A4 will be preserved. (Condition 13)

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preserve the existing capacity of the natural drainage.

6. To mitigate impacts on the natural environment, a 100-foot wide no-build zone shall be placed on the final plat, as shown on the preliminary plat, and a notification of the no-build zone shall be included in the Notifications Document. (Conditions 1 and 12)

Conclusion of Law:

With the condition of approval, the proposed subdivision will likely have a minimal impact on wildlife.

CRITERION 6: EFFECTS ON PUBLIC HEALTH AND SAFETY

Findings of Fact:

1. To mitigate impacts on public health and safety, the subdivider shall apply for County-issued addresses and a provision requiring property owners to post County-issued addresses at their driveways shall be in the covenants. (Conditions 2 and 10)

2. The proposed subdivision is located within the Three Mile Rural Fire District and with Conditions 2 and 11 impacts to the District will have been addressed.

3. The preliminary plat and soils map indicate that the subdivision may have soils rated as severe for road and building construction. To educate property owners and to mitigate potential impacts of this subdivision on public health and safety, a notification of the

potential for severe soils shall be included in the Notifications Document filed with the final plat. A reduced plat showing the approximate locations of soils rated as severe for roads and building construction and descriptions of the severe soils in question shall be attached to the Notifications Document as an exhibit. (Condition 1)

4. To mitigate impacts on the natural environment, a 100-foot wide no-build zone shall be placed on the final plat, as shown on the preliminary plat, and a notification of the no-build zone shall be included in the Notifications Document. (Conditions 1 and 12)

5. The subdivider shall place a "no ingress/egress" restriction along the Eastside Highway frontage of the subdivision. A notification of limitation of access onto a state road shall be included in the Notifications document. (Conditions 1 and 7)

6. To mitigate the impacts of light pollution stemming from new construction, the protective covenants shall include a provision requiring full cut-off lighting with the exception of flag poles. (Condition 2)

7. There is a prevalence of radon in the County and to mitigate impacts on public health and safety, the covenants shall include a statement regarding radon exposure. (Condition 2)

Conclusion of Law.

The mitigating conditions and requirements of final plat approval will address impacts on public health and safety.

COMPLIANCE WITH:

1) THE SURVEY REQUIREMENTS PROVIDED FOR IN PART 4 OF M.C.A. 76-3.

Finding of Fact:

The Seal of a Professional Land Surveyor or Engineer is required on all final plats, which states that the subdivision complies with part 4 of M.C.A. 76-3.

Conclusion of Law:

This proposal meets the survey requirements or conditions have been required to bring the proposal into compliance.

2) THE LOCAL SUBDIVISION REGULATIONS PROVIDED FOR IN PART 5 OF M.C.A. 76-3. Finding of Fact:

Subdivisions are required to comply with the local subdivision regulations provided for in part 5 of M.C.A. 76-3.

Conclusion of Law:

The developer has submitted a plan which complies with the requirements of local subdivision regulations or conditions have been required that will bring the plan into compliance.

3) THE LOCAL SUBDIVISION REVIEW PROCEDURE PROVIDED FOR IN THE RAVALLI COUNTY SUBDIVISION REGULATIONS

Findings of Fact:

- 1. Subdivisions are required to comply with the local subdivision review procedure provided for in the Ravalli County Subdivision Regulations.
- 2. A decision of the governing body rejecting or approving a proposed subdivision may be appealed to the district court within thirty (30) days of such decision. The petition shall specify the grounds upon which the appeal is made. An appeal may be made by the subdivider; a landowner with a property boundary contiguous to the proposed subdivision or

a private landowner with property within the unincorporated area of the county that can show a likelihood of material injury to the landowner's property or its value; a first class municipality if the subdivision is within three miles of its limits, a second class municipality if a subdivision is within two miles of its limits, a third class municipality or town if the subdivision is within one mile of its limits. An aggrieved party means a person who can demonstrate a specific personal and legal interest, as distinguished from a general interest, who has been or is likely to be specially and injuriously affected by the decision.

Conclusion of Law:

This development plan proposal has followed the necessary application procedure and has been reviewed within the procedures provided in Chapter 3 of the Ravalli County Subdivision Regulations.

CONSISTENCY WITH EXISTING ZONING AND COVENANTS

Findings of Fact:

1. There is no existing zoning on the property.

2. There are no existing covenants associated with the property.

Conclusions of Law:

The property has no zoning or covenants.

PROVISION OF EASEMENTS FOR UTILITIES

Finding of Fact:

The proposed subdivision will be served by Northwestern Energy and Qwest Telephone. Utility certificates are a requirement of final plat approval.

Conclusion of Law:

Utility services will be available to this subdivision.

PROVISION OF LEGAL AND PHYSICAL ACCESS

Finding of Fact:

Physical and legal access for this subdivision is proposed via Stargaze Court, and Eastside Highway. (Local Services)

Conclusion of Law:

With the conditions of approval and requirements of final plat approval, the proposal meets physical and legal access requirements.

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EXHIBIT A-1

Region 2 Office 3201 Spurgin Road Missoula, MT 59804-3099 406-542-5500 September 7, 2005

Denis Applebury 914 Highway 93 Victor, MT 59875

Dear Mr. Applebury:

Reference: Vernon Ranchettes, Lot 1 (Scussel)--Proposed minor (4 lots on 5.0 acres) subdivision, southeast of Florence

We have reviewed the preliminary plat for this subdivision, and our comments follow.

- 1. This proposed subdivision includes wooded slopes and a wooded draw along the steeper eastern portion, and it is located about one-quarter mile from the Bitterroot River and its associated riparian areas and within one-half mile of the Lee Metcalf National Wildlife Refuge. There is a high likelihood of human/wildlife interactions at this location. In particular, wildlife such as white-tailed deer, fox and skunks are found in the area, as well as an occasional black bear and possible mountain lion. Numerous small mammal and bird species (including nesting waterfowl and birds of prey) can be found nearby. We recommend that "living with wildlife" issues be conveyed to future landowners for this subdivision, preferably as a development covenant in order to help homeowners deal with and avoid potential wildlife issues.
- 2. The proximity of this proposed subdivision to the Lee Metcalf Refuge and the Bitterroot River could create possible conflicts between waterfowl hunters and the subdivision, and we recommend a section in the covenants (enclosed) to address this issue.
- 3. The US Geologic Survey map for this area indicates a natural drainage feature that runs downhill from northeast to southwest through lots A3 and A4. We do not know the current status of this drainage, but if there is seasonal water present and/or riparian vegetation grows along the sides of the drainage, we suggest consideration of a 50-foot "no build/no alteration" buffer zone extending outward from each side of the centerline for this drainage and that this buffer zone be shown on the plat, in order to protect this natural drainage feature and its function.

Attached is our recommended version of such covenants. Please contact Sharon Rose at our office (542-5540; shrose@mt.gov) if you would like an electronic version of these comments. Thank you for providing the opportunity for MFWP to comment on this subdivision.

Sincerely,

Mack Long Regional Supervisor

ML/sr

Enclosure: Recommended covenants for wildlife

C: Ravalli County Planning Department, Attn: Karen Hughes, 215 S. 4 St., Ste. F, Hamilton, MT 59840

Covenants for <u>Vernon Ranchettes, Lot 1 (Scussel)</u>) subdivision, suggested by Montana Fish, Wildlife & Park; Missoula; <u>September 7, 2005</u>

Section __: Living with Wildlife

Homeowners must accept the responsibility of living with wildlife and must be responsible for protecting their vegetation from damage, confining their pets, and properly storing garbage, pet food, livestock feed and other potential attractants. Homeowners must be aware of potential problems associated with the occasional presence of wildlife such as deer, bears, mountain lions, wolves, skunks and raccoons. Please contact the Montana Fish, Wildlife & Parks office in Missoula (3201 Spurgin Road, Missoula, MT 59804) for brochures that can help homeowners "live with wildlife." Alternatively, see the Education portion of FWP's web site at www.fwp.mt.gov.

The following covenants are designed to help minimize problems that homeowners could have with wildlife, as well as helping homeowners protect themselves, their property and the wildlife that Montanans value.

- 1. Homeowners must be aware of the potential for **vegetation damage by wildlife**, **particularly from deer** feeding on green lawns, gardens, flowers, ornamental shrubs and trees in this subdivision. They should be prepared to take the responsibility to plant non-palatable vegetation or protect their vegetation (fencing, netting, repellents) in order to avoid problems. Homeowners should consider landscaping with native vegetation that is less likely to suffer extensive feeding damage by deer.
- 2. Gardens and fruit trees can attract wildlife such as deer and bear. Keep produce and fruit picked and off the ground, because ripe or rotting vegetable material can attract bears and skunks. To help keep wildlife such as deer out of gardens, fences should be 8 feet or taller. Netting over gardens can help deter birds from eating berries.
- 3. **Do not feed wildlife** or offer supplements (such as salt blocks), attractants, or bait for deer or other wildlife. Feeding wildlife results in unnatural concentrations of animals that could lead to overuse of vegetation and disease transmission. Such actions unnecessarily accustom wild animals to humans, which can be dangerous for both. It is against state law (MCA 87-3-130) to provide supplemental feed attractants if it results in a "concentration of game animals that may potentially contribute to the transmission of disease or that constitutes a threat to public safety." Also, homeowners must be aware that deer might occasionally attract mountain lions to the area.
- 4. Garbage should be stored in secure animal-resistant containers or indoors to avoid attracting animals such as bears, raccoons, dogs, etc. If stored indoors, garbage cans should not be set out until the morning of garbage pickup, and should be taken back indoors that same day (after garbage pickup).
- 5. Pets must be confined to the house, in a fenced yard, or in an outdoor kennel area when not under the direct control of the owner, and not be allowed to roam as they can chase and kill big game and small birds and mammals. Under current state law it is illegal for dogs to chase hooved game animals and the owner may also be held guilty (MCA 87-3-124).

- 6. Pet food and livestock feed must be stored indoors, in enclosed sheds or in animal-resistant containers in order to avoid attracting wildlife such bears, mountain lions, skunks, raccoons, etc. When feeding pets or livestock do not leave food out overnight. Consider feeding pets indoors so that wild animals do not learn to associate food with your home.
- 7. Barbecue grills must be stored indoors. Keep all portions of the barbecues clean. Food spills and smells on the grill, lid, etc. can attract bears and other wildlife.
- 8. Consider **boundary fencing** that is no higher than 3-1/2 feet (at the top rail or wire) and no lower than 18 inches (at the bottom rail or wire) in order to facilitate wildlife movement and help avoid animals such as deer becoming entangled in the fence or injuring themselves when trying to jump the fence.
- 9. **Bird feeders** attract bears, and should be avoided from April 1st through the end of November. If used, bird feeders should: a) be suspended a minimum of 20 feet above ground level, b) be at least 4 feet from any support poles or points, and c) should be designed with a catch plate located below the feeder and fixed such that it collects the seed knocked off the feeder by feeding birds.
- 10. Compost piles can attract skunks and bears. If used they should be kept indoors or built to be wildlife-resistant.
- 11. Purchasers of lots within this subdivision must recognize the subdivision is located near public hunting areas (such as the Lee Metcalf National Wildlife Refuge and the Bitterroot River) where lawful waterfowl hunting and the associated **discharge of shotguns** could occur from early morning until sunset, and the season can run from September into January.

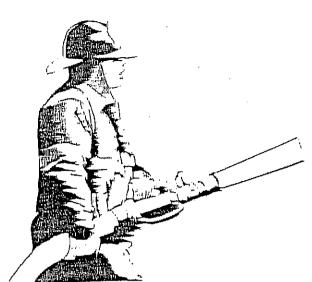


EXHIBIT A-2

THITEE MILE FIVE DISTINCT 1064 THITEE MILE CP. P.D. STEVENSVILLE, MI 59870 ATTN: CHIEF GIESE

June 16, 2004

IC C/4 0/6.934

RAVALLI COURTY FLANNING OFFICE 215 4th Street, Stitle F HAMILTON, MT 59840

The Three Mile Fire District has established the following requirements for new purposed subdivisions within ites district. The requirements where established with consideration for life safety of the residence of the district as well as the Volunteers who are called upon to protect the district and to mitigate harm to the public health and environment.

When establishing the requirements, emphasis was given to the Uniform Fire Code, Articles 9 and 10, and Appendix ID-A. The Ravalli County Subdivision Regulations. The Ravalli County Road Department standards and the 1993 Fire Protection Guidelines for Wildland Residential Interface Development. These Publications and Articles establish rules for dealing with fire apparatus access roads, fire department access to buildings, water supplies for fire protection installation and maintenance of fire-protection systems and clearance of brush and vegetative growth from roadways.

Consideration was also given to Section 23.7.105 Administrative Rules of Montana, which is adopted pursuant to authority of 50-3-102 (2) and 50-3-103, MCA, which incorporates by reference the UFC (Uniform Fire Code) and establishes a minimum fire prevention code for Montana.

Every effort has been made to use words and phrases consistent with the definitions given them in the above mentioned publications.

WATER SUPPLY REQUIREMENTS:

The water supply required by the Uniform Fire Code for one and two family dwellings, not exceeding 3600 square feet, requires a flow rate of 1000 G.P.M. The code does not specify the duration of flow for one and two family dwellings, however the Fire Protection Guild lines for Wildland Residential Interface Development and the Ravalli County Subdivision Regulations list the minimum water supply of 2500 gallons per lot.

The Three Mile Fire District currently has an ISO Class 8 Residential rating which requires a water flow of 200 gallons per minute for a duration of 20 minutes or a total flow of 4000 gallons per residence.

Considering the above information the Fire District will accept a water supply of 1000 gallons per minute or 2500 gallons per lot of stored water. The water supply installation, uplicep and maintenance will be the responsibility of the Subdivision.

The Fire District realizes the financial burden of installing and maintaining a water supply and or storage tanks capable of providing the required water flows and is willing to accept a payment of \$ 500.00 (Five Hundred dollars and no/100) per lot, in lieu of the water supply required by the UFC. The Fire District will then upon its elective purchase fire fighting apparatus or develop water supplies.

EXCEPTIONS: 1. When buildings are completely protected with an approved automatic sprinkler system, the above listed water supply and payment schedule may be reduced by 50%. The Subdivision Covenants must state that A All residences constructed within the subdivision be completely protected with an approved automatic sprinkler system. Payment for the reduced amount of \$ 250.00 per lot will be accepted at the time the Subdivision is approved. If at any time any residence is built without an approved sprinkler system within the subdivision, all lots will be subject to an additional \$ 250.00 dollar payment, regardless weather they have sprinklered residences located on them or not.

If you have any questions regarding the above listed requirements, please feel free to contact me at (406) 777-2749. I am willing to meet with you on your proposed site to review the above requirements or discuss life safety issues.

Sincerely,

Russel R. Giese Three Mile Fire District Chief





Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov September 6, 2005

Jason Rice, PE Landworks Consulting & Design, Inc PO Box 7908 Missoula MT 59807

RE:

Vernon Ranchettes, Lot 1 AP

Ravalli County E.Q. #06-1113

Dear Mr Rice:

The plans and supplemental information relating to the water supply, sewage, solid waste disposal, and storm drainage (if any) for the above referenced division of land have been reviewed as required by ARM Title 17 Chapter 36(101-805) and have been found to be in compliance with those rules.

Two copies of the Certificate of Subdivision Plat Approval are enclosed. The original is to be filed at the office of the county clerk and recorder. The duplicate is for your personal records.

Development of the approved subdivision may require coverage under the Department's <u>General Permit for Storm Water Discharges Associated with Construction Activity</u>, if your development has construction-related disturbance of one or more acre. If so, please contact the Storm Water Program at (406) 444-3080 for more information or visit the Department's storm water construction website at http://www.deq.state.mt.us/wqinfo/MPDES/StormwaterConstruction.asp. Failure to obtain this permit (if required) prior to development can result in significant penalties.

Your copy is to inform you of the conditions of the approval. Please note that you have specific responsibilities according to the plat approval statement primarily with regard to informing any new owner as to any conditions that have been imposed.

If you wish to challenge the conditions of this Certificate of Subdivision Plat Approval, you may request a hearing before the Board of Environmental Review or the Department, pursuant to Section 76-4-126, MCA and the Montana Administrative Procedures Act.

If you have any questions, please contact this office.

Sincerely,

Steve Kilbreath, Supervisor Subdivision Review Section

SK/ML

cc:

County Sanitarian
County Planning Board

STATE OF MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY CERTIFICATE OF SUBDIVISION APPROVAL

(Section 76-4-101 et. seq., MCA)

TO: Count

County Clerk and Recorder

E.O. #06-1113

Ravalli County Hamilton, Montana

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as Vernon Ranchetts, Lot 1 AP

A tract of land located in and being a portion of Lot 1, Vernon Ranchetts, a platted subdivision of Ravalli County, Montana and being more particularly described as Tract A, Certificate of Survey No. 630, containing 5.05 acres.

consisting of four (4) lot have been reviewed by personnel of the Permitting and Compliance Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the lot size as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT each lot shall be used for one single-family dwelling, and,

THAT each individual water system will consist of a well drilled to a minimum depth of 25 feet constructed in accordance with the criteria established in Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT the data provided indicates an acceptable water source at a depth of approximately 100 to 200 feet, and,

THAT each individual wastewater treatment system will consist of a septic tank, effluent filter, and subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM, and,

THAT each subsurface drainfield shall have an absorption area of sufficient size to provide a maximum application rate of 0.8 gallons per day per square foot of drainfield for Lots A1, A2, A3 and A4, and,

THAT when the existing water supply system on Lot A3 is in need of extensive repairs or

Subdivision Approval Page 2 of 2 Vernon Ranchetts, Lot 1 AP EQ #06-1113 Ravalli County

replacement it shall be replaced by a well drilled to a minimum depth of 25 feet constructed in accordance with the criteria established in Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no wastewater treatment system shall be constructed within 100 feet of the maximum highwater level of a 100 year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any water supply source, and,

THAT the water supply, wastewater treatment and storm drainage systems must be located as shown on the approved plans and attached lot layout, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the plat, approved location of water supply and wastewater treatment system as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed wastewater treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

YOU ARE REQUESTED to record this certificate by attaching it to the plat filed in your office as required by law.

DATED this 23 rd day of August, 2005.

RAVALLI COUNTY HEALTH OFFICER

By: Moren I hadle Morgan T. Farrell, R. S.

Ravalli County Environmental Health

215 South 4th - Suite D Hamilton, MT 59840

Owner's Name: Jeff & Tracy Scussel

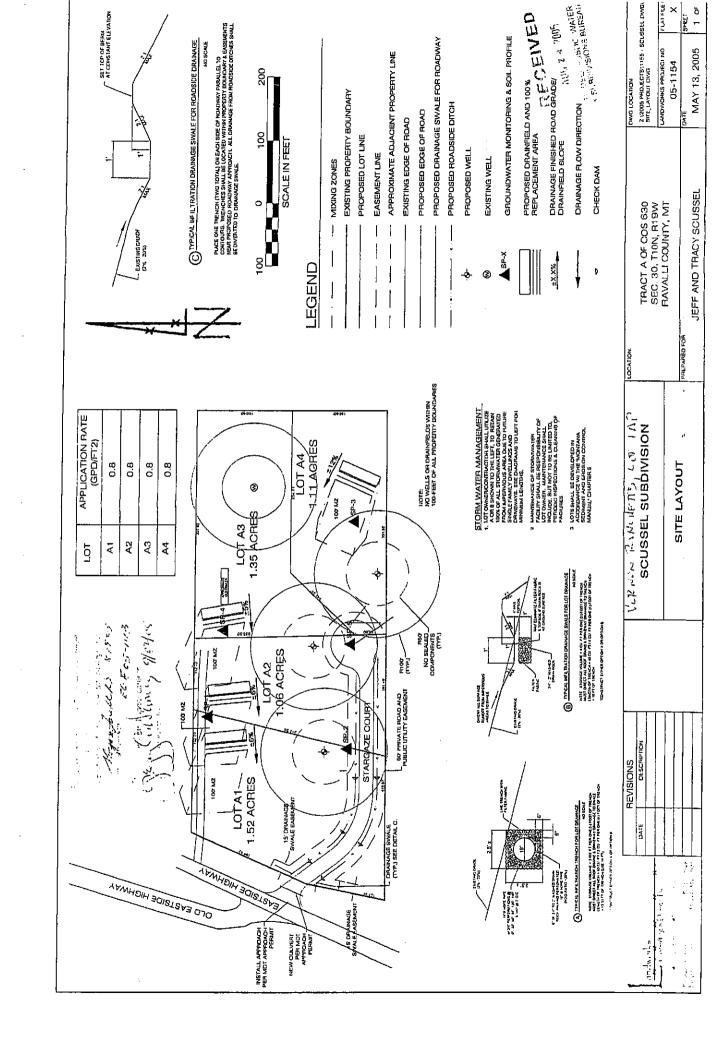
RICHARD OPPER

DIRECTOR

Jon Dilliard, Bureau Chief Public Water and Subdivision Bureau

Permitting and Compliance Division

Department of Environmental Quality



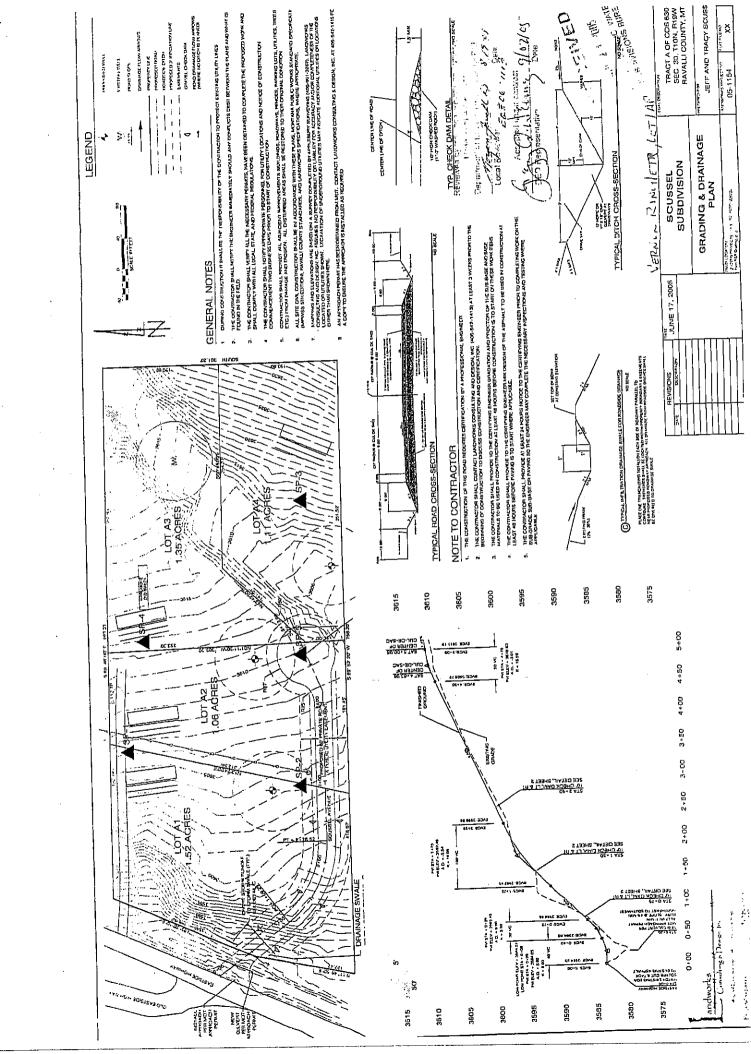


EXHIBIT A-5

Tristan Riddell

From:

Nathan Lucke [nathan.lucke@landworksmt.com]

Sent:

Tuesday, October 24, 2006 4:26 PM

To:

Tristan Riddell

Subject:

Vernon Ranchettes

Follow Up Flag: Follow up

F-11----

Flag Status:

Red

Tristan,

You have indicated that WGM's comments included a statement that the final driveway plans will be provided at final plat, specifically for the southeast lot. You have requested that we address this issue as part of Preliminary Plat review due to some of the regulations regarding existing drainage-ways. There are two very easy ways of dealing with this issue when the driveway is constructed, which are as follows:

- 1. If the driveway is built-up, a culvert should be placed that is of sufficient size. I believe the G&D report addressed the necessary size, but there is also an upstream culvert that should be (at a minimum) matched in size.
- 2. The driveway could also be built at-grade, thus having no affects whatsoever on the drainage way capacity or function.

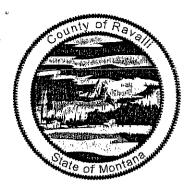
I do not agree that "final" plans should be required at final plat (since we won't know the answer), and I don't recall that being what was discussed with WGM. I would prefer both options be permitted as part of final plat, but if needed, the at-grade option would be fine too.

If there are any other questions, please let me know. Thanks.

Nathan Lucke, P.E Landworks Consulting & Design, Inc. P.O. Box 7908 Missoula, MT 59807 (406) 542.1415 (406) 542.8252 fax

802 West Main Hamilton, MT 59840 (406) 363-0071 (406) 363-0073 fax

EXHIBIT A-4



ROAD AND BRIDGE DEFARITION

244 Fairgrounds Road Hamilton, Montana 59840 Tele: 406.363.2733 · Fax: 406.363.6701 RECEIVED

SEP 1 8 2006 TC-00- 09-14-60-Ravalli County Planning Dept.

MEMORANDUM

DATE

15 SEPTEMBER 2006

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RAVALLI COUNTY PLANNING DEPARTMENT

FROM

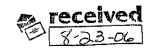
DAVID H. OHNSTAD, COUNTY ROAD SUPERVISOR

SUBJECT VERNO

VERNON RANCHETTES PRELIMINARY DESIGN REVIEW

Attached please find analysis and comment from Ravalli County's consulting engineers relative to the preliminary design submittal for the proposed Vernon Ranchetts subdivision project. The Road & Bridge Department will approve this preliminary design with the understanding and expectation that those issues identified in the consulting engineer's report of 16 August will be addressed appropriately through the final design process. The Planning Department's attention is directed to the "no-build zone" issue noted in the engineer's analysis.





ENGINEERING SURVEYING PLANNING

3021 Palmer • P.O. Box 16027 • Missoula, Montana 59808-6027

(406) 728-4611 FAX: (406) 728-2476

wgmgroup.com

DATE:

August 16, 2006

TO:

David Ohnstad, Ravalli County Road & Bridge Department

CC:

Ranae Harding, Landworks Consulting & Design, Inc.

FROM:

Ryan J. Salisbury, P.E.

RE:

Vernon Ranchetts Preliminary Review Completion

WGM Group Reference No. 06-02-05

On behalf of the Ravalli County Road and Bridge Department (RCRBD), we have completed our preliminary review of the above referenced project. Adequate road, grading, and drainage information has been submitted for the project at this time.

We are in agreement with the no-build zone that has been identified on the revised plan set that is stamped by Nathan Lucke, dated July 15, 2006. It should be noted that no design has been submitted for the driveway accesses to lots A3 and A4 and it is assumed by the reviewer that the Ravalli County Planning Office is okay with driveway construction across the no-build zone and that the lots can be accessed across a no-build zone. At final review of the plans, a design will need to be submitted that will adequately convey water across the proposed driveways for each lot.

If the RCRBD is in concurrence with our review, please forward this letter to the Planning Office to be included with the full subdivision application.

A Preliminary Comment Memorandum was sent to the design engineer in accordance with Step 6 on the RCRBD's "Schedule of Activities – Processing & Coordination of Subdivision Projects" form. We are now sending this letter to your office in accordance with Step 7 of the RCRBD's Schedule of Activities to complete our preliminary review of the project.

We have included a copy of the following with this letter:

- 1) Preliminary comment memorandum from WGM Group.
- 2) Preliminary comment response letter from Landworks.
- 3) Revised copies of the Preliminary Grading and Drainage Plan and the Preliminary Plat submitted by Landworks in response to our comments.

This review is based on the 2004 version of the AASHTO Geometric Design of Highways and Streets, the 2001 version of the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400), and the Ravalli County Subdivision Regulations.

Vernon Ranchettes August 16, 2006 Page 2 of 2

Review of the plans and reports are limited to general conformance with the Ravalli County Subdivision Regulations in place at the time the subdivision application was submitted. This is not a complete or comprehensive review of the design assumptions or conclusions of the design professional who submitted the plans and reports. A final set of construction plans will need to be submitted by the developer for review by the RCRBD prior to beginning construction.

Thank you for the opportunity to work with the Ravalli County Road Department. If you have any questions, please contact our office.





3021 Palmer • PO Box 16027 • Missoula, MT 59808-6027

Phone: (406)728-4611 Fax: (406)728-2476 www.wgmgroup.com

DATE:

March 30, 2006

TO:

Nathan Lucke, Landworks Consulting & Design, Inc.

CC:

David Ohnstad, Ravalli County Road & Bridge Department

FROM:

Ryan J. Salisbury, P.E.

RE:

Vernon Ranchetts Preliminary Review Comments

On behalf of the Ravalli County Road and Bridge Department (RCRBD), our office has completed a review of the plans and reports submitted by your office. This review memorandum is part of Step 6 on the RCRBD's "Schedule of Activities – Processing & Coordination of Subdivision Projects" form. This review is based upon the 2004 version of the AASHTO Geometric Design of Highways and Streets and the 2001 version of the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400).

Based on our review we have the following comments:

Roadways

- 1) The design speed listed on the "Schedule for Roadway Design" is 25 mph, but a 125-foot centerline radius with no superelevation only meets a design speed of 20 mph. A lower design speed may be applicable to this design situation, but please update the Schedule for Roadway Design sheet to reflect the appropriate design speed used for the corresponding horizontal curve.
- 2) Exhibit 5-2 (Page 381) of AASHTO is the design guideline table that provides minimum "K" values on sag vertical curves. The design engineer has proposed "K" values less than the minimum outlined in the AASHTO tables. Because the "K" values used in the design of Stargaze Court (K=5 and K=8), a design exception must be submitted to provide justification for "K" values below the minimum. AASHTO provides for design flexibility by the design engineer, but further explanation is needed to better understand the design engineer's assumptions.
- 3) In addition, the "Schedule for Roadway Design Submittal" sheet should be updated to reflect the correct "K" values. "K" values of 19 and 37 are minimum values for a 30 mph design speed. The sheet submitted by your office labels these values as maximum values, and do not correspond with the 25 mph design speed listed on the design submittal.

4) As indicated on the "Schedule for Roadway Design Submittal," no parking will be allowed on Stargaze Court. As a reminder to the design engineer, the current typical roadway section does meet the minimum Ravalli County regulations; however, with this roadway width, a 20-foot clear spacing for emergency vehicles is not available if cars park along Stargaze Court. A minimum roadway width of 28 feet (24 feet of paved surface area and 2-foot gravel shoulders) would be required to allow parking on one side of the road. Pages 392 and 393 in the AASHTO manual discuss minimum lane widths and parking widths.

5) A stop sign should be provided at the intersection of Stargaze Court and the East Side Highway.

- 6) At the intersection of Stargaze Court and East Side Highway, please call out the radius length for approach returns on the plans.
- 7) The RCRBD understands that an approach permit for Stargaze Court has been approved by MDT and all requirements of this permit will be met by the developer and the permit will be renewed prior to construction.

Storm Drainage

- 1) Larger diameter rock will be required for the check dams in order to better maintain their integrity. 4-inch to 6-inch diameter "sump" rock is recommended.
- 2) The drainage report indicates "large off-site storm water flows are not expected." From preliminary review of the USGS map, it appears that the drainage-way that runs through the site drains a relatively large upstream basin. Please provide a USGS map of the basin upstream and downstream of the site; corresponding design calculations to determine the extents of the 100-year storm through the site, in order to protect a future home site; and any mitigation measures necessary to manage construction of a future home site, sheds, etc. with the flow path of the 100-year runoff.

Grading

- Due to the steep existing grades on the site, finish grade contours for the infiltration drainage swale, roadway catch slopes, and removal of the existing gravel access road into the site should be provided with the submittal.
- 2) Maintenance of storm water facilities is assumed to be addressed in the Road Maintenance Agreement submitted with the subdivision application.

Please respond to these comments as outlined in Step 6 of the attached "Schedule of Activities – Processing & Coordination of Subdivision Projects" sheet from the RCRBD, or send us notification to submit these comments to the Ravalli County Planning office for submittal with your subdivision application to the Planning Board. Thank you.

andworks

MISSOULA P.O. Box 7908 Missoula, MT 59807 Ph: (406) 542-1415 Fax: (406) 542-8252

Consulting & Design, Inc.

HAMILTON 802 W. Main | Hamilton, MT 59840 Ph. (406) 363-0071 | Fax. (406) 363-0073 www.landworksmt.com

July 14, 2006

Ryan J. Salisbury, P.E. WGM Group 3021 Palmer Dr. Missoula, MT 59808

Re:

Vernon Ranchettes Preliminary Review Comments

Dear Ryan:

This letter is in response to your email dated July 4, 2006 that was sent to Nathan Lucke at our office. We have answered your comment regarding the no-build zone below.

Storm Drainage

1. A revised plat and Grading and Drainage Plan are attached showing the no-build zone through the natural drainage way of the property, which will ensure no homes will be inundated during a 100-year storm event.

Please don't hesitate to call our office if you have any questions about this submittal.

Sincerely,

Landworks Consulting and Design, Inc.

Renae G. Harding, E.I.

Enclosures:

WGM email dated 7/04/06

Revised Plat

Revised Grading and Drainage Plan

C:

Scussel, letter only

Applebury Survey, w/ enclosure

RCPD, w/ enclosure

File

Z;\2005-Projects\1154 - Scussel\3_DESIGN\ROADS\ftr.wgm.03.doc

JUL 10 2006

From: Ryan Salisbury [mailto:RSalisbury@wgmgroup.com]

Sent: Tuesday, July 04, 2006 2:20 PM

To: Nathan Lucke

Subject: RE: Vernon Ranchettes

Nathan,

I took a quick look at this over the weekend and will finalize my comments after our Aspen Springs public hearing. However, I do disagree with the statements made to a house being built 0.5 feet above grade and that will handle the storm water. It seems as though the only place to put a house on lot A4 is in that drainage way. That is not acceptable. Even though the house top of foundation is typically 6 inches above finished grade, there is no guarantee in an area with minimal building permits required. In addition, crawl spaces and/or window wells if there is a basement will be flooded potentially. I will have to discuss this issue with the planning office and perhaps the Floodplain administrator.

The vertical curve design looks fine and the answers to the rest of the comments are fine as well.

Ryan Salisbury, P.E.

WGM Group, Inc.

3021 Palmer P.O. Box 16027 Missoula, MT 59808-6027 Tele: (406) 728-4611

Fax: (406) 728-2476

Email: Rsalisbury@WGMGroup.com

From: Nathan Lucke [mailto:nathan.lucke@landworksmt.com]

Sent: Tuesday, June 27, 2006 8:40 AM

To: Ryan Salisbury

Subject: Vernon Ranchettes

Ryan,

We recently responded to your comments regarding the above referenced project. Do you have an estimate for schedule on your review? Thanks.

Nathan Lucke, P.E Landworks Consulting & Design, Inc. P.O. Box 7908 Missoula, MT 59807 (406) 542.1415 (406) 542.8252 fax

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		·	

andworks

Consulting & Design, Inc.

MISSOULA P.O. Box 7908 Missoula, MT 59807 Ph: (106) 542-1415 Fax: (106) 542-8252

#AMILTON 802 W. Main | Hamilton, MT 59840 Ph: (406) 363-0071 | Fax: (406) 363-0073

www.landworksmt.com

June 7, 2006

Ryan J. Salisbury, P.E. WGM Group 3021 Palmer Dr. Missoula. MT 59808

Re: Vernon Ranchettes Preliminary Review Comments

Dear Ryan:

This letter is in response to your preliminary review comments dated March 30, 2006. We have answered your comments below.

Roadways

- The horizontal radius has been adjusted to a minimum centerline radius of 125 feet on the Schedule for Roadway Design for a reduced design speed of 20 mph, which is required per AASHTO Very Low-Volume Exhibit 5. A variance is not required because we have designed the road to the 25 mph guidelines that reduce the design speed.
- 72. The sag curve shown on the plans has been adjusted to a 156-foot vertical curve with a minimum K-value of 26 for a design speed of 25 mph. We have also spoken with MDT to confirm that they will approve the proposed design grades for the approach at the Eastside Highway and will be submitting an updated approach permit for the new design.
- 73. The minimum K-values have been adjusted to reflect the 25 mph design speed for both the sag and crest vertical curves.
- Due to the size of the lots and relatively long driveways as well as the steep grade along the road, it is not anticipated that parking will occur along Stargaze Court. Maintaining a twenty foot clear spacing for emergency vehicles should not be a problem. "No Parking" signs will be posted along the cul-de-sac to allow emergency vehicle access.
- V5. While a signing plan is not required for preliminary review, we have included a "Stop" sign and RCRBD Standard street signs at the intersection of Stargaze Court and Eastside Highway as well as "No Parking" signs along the cul-de-sac. We would appreciate any comments you may have on this design before final submittal.
- f_6 . Radius lengths of 40 feet and 25 feet for the approach returns have been called out on the plans.
- 7. The developer will meet the requirements per the MDT approach permit. A copy will be included with the final design.

1. A larger diameter sump rock of 4 to 6 inches has been called out on the plans to maintain the integrity of the check dams.

JUN 13 2006.

5

2. A USGS map is attached showing the upstream and downstream drainage-way that runs through the property. The Rational Method design calculations for a 100-year storm event of the upstream and downstream basins indicate a total flow of 50.72 cfs through the drainage way. The drainage-way through the property is a minimum of 45 feet wide. In a 100-year storm event, Flowmaster calculations show a channel depth of 0.28 feet for 50.72 cfs of flow. In the unlikely event that a homeowner would choose to build a house in the drainage way, standard building practices elevate a homesite a minimum of 0.5 feet above the surrounding ground to provide for positive drainage away from the structure. These standard practices would sufficiently elevate the homesite above the calculated 100-year flow depth, which will prevent a home from being inundated in such an event. The drainfield is not proposed within the drainage way.

Grading

1. The existing gravel road will be abandoned by others and is noted on the plans. A detail of the infiltration drainage swales has been shown; however, final elevations will be determined during final design.

2. The maintenance of the storm drain facilities is addressed in the Road Maintenance Agreement submitted with the subdivision application.

Please don't hesitate to call our office if you have any questions about this submittal.

Sincerely,

Landworks Consulting and Design, Inc.

Renae G. Harding, E.I.

Enclosures:

WGM Memo dated 3/30/06 Schedule for Roadway Design Basin map and calculations

Revised Grading and Drainage Plan

C: Scussel, letter only

Applebury Survey, w/ enclosure

RCPD, w/ enclosure

File

Z:\2005 Projects\1154 - Scussel\3_DESIGN\ROADS\ltr.wgm.01.doc

DRAINAGE CALCULATIONS PRE-CONSTRUCTION

Onsite Basin Flows

PROJECT: SCUSSEL SUBDIVISION PREPARED BY: LANDWORKS CONSULTING & DESIGN, INC.

June 17, 2005

(Rational Method)

Calculate Composite C = Sum of (Ci X A) / Total Area:

	PRE-CONSTRUCT Drainage Basin		CTION
			sin
Description:	Area (ac)	Cî	Ci X A
Existing Acreage	251.100	NA	NA
Impervious Area (Buildings and Asphalt Roads)	0.000	NA	NA
Semi-Impervious Area (Gravel Streets and Driveways)	0.000	NA	NA
Improved Lawns and Landscaped	0.000	NA	NA
Unimproved Area	251.100	0.20	50.22
Composite C, Pre-Development:		0.20	

Comp. $C = \sum (Ci \times A)/A$

Intensity = i:	2 - Year 1-hour.	10 - Year 1-hour:	100 - year 1-hour:
	0.38 in/hr	0.64 in/hr	1.01 in/hr

Based on the Misssoula Air Port Station from Table B-4 (See Appendix C - Design Aids)

Calculate Q:

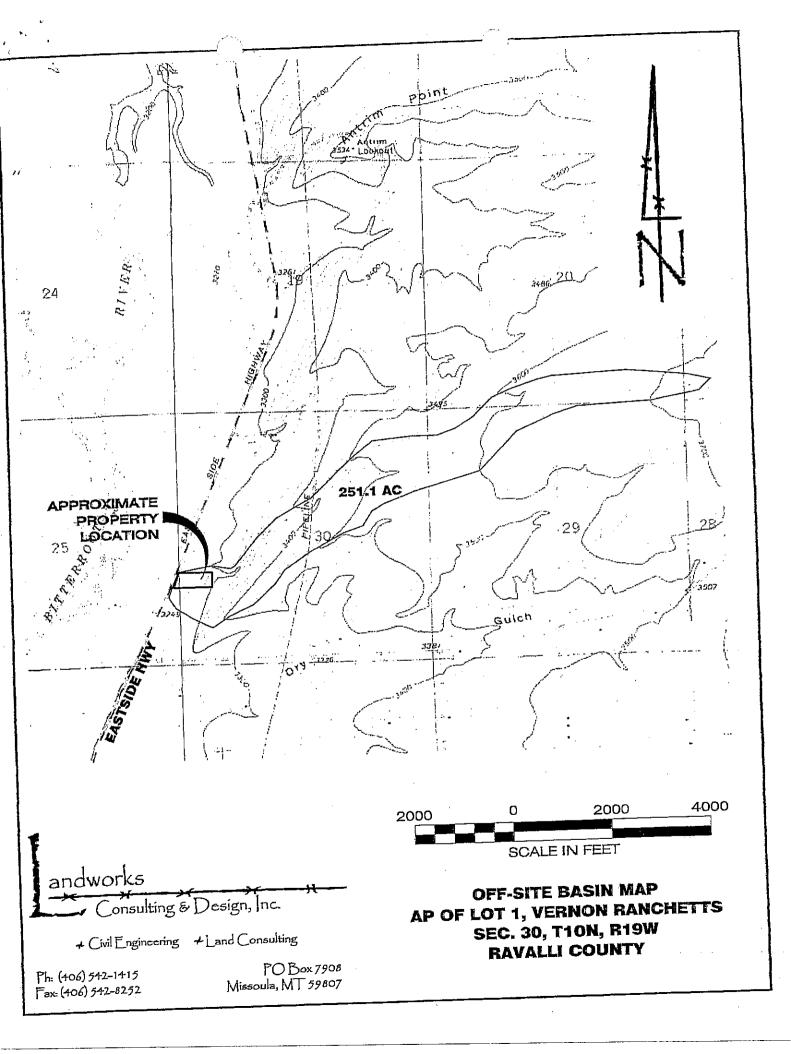
Drainage Ba	
	ısin
100-Year, One-hour Event C x i(in/hr) x Area(ac) 50.72 cfs	

Channel through Scussel property Worksheet for Trapezoidal Channel

Project Description	on
Project File	z:\2005 projects\1154 - scussel\3_design\roads\scussel .fm2
Worksheet	channel through property
Flow Element	Trapezoldal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Mannings Coefficient	0.030	
Channel Slope	0.0338	54 ft/ft
Left Side Slope	4.4000	00 H : V
Right Side Slope	6.4000	00 H : V
Bottom Width	45.00	ft
Discharge	50.72	cfs

Results		
Depth	0.28	ft
Flow Area	13.19	ft²
Wetted Perimeter	48.12	ft
Top Width	48.06	ft
Critical Depth	0.34	ft
Critical Slope	0.0191	39 ft/ft
Velocity	3.85	ft/s
Velocity Head	0.23	ft
Specific Energy	0.51	ft
Froude Number	1.29	
Flow is supercritical.		



Ravalli County Road & Bridge Department

Schedule for Roadway Design Submittal - preliminary

Date: 6/09/06 Project	Design by: Renae Harding, El Re	eviewed by Nathan Lucke, PE
Project Name: AP of Lot 1, Vernon		Prelim Design: X
Roadway Name: Stargaze Court		Final Design:
Station (or location) entirety		
Proposed	l Design	Reference
Design ADT: 32 max % Tr	ucks: approx 0	ITE Trip Generation Manual
D	Posted Speed: TBD	Ravalli County Regs Table B-1
Functional Classification: Minor lo	cal access	AASHTO Very Low Volume p. 26
Terrain: Flat Rolling X Mount		observation
	Geometric - Alignment	
Horizontal Curvature - Minimum Ra	dius: 125 feet	AASHTO Very Low Volume p. 26*
Maximum Design Grade: 10%		Ravalli County Regs Table B-1
Minimum Stopping Sight Distance:	125 ft	AASHTO Very Low Volume p. 34
Vertical Cu Crest K Value: 7 / Sag K Val		AASHTO Very Low Volume pp. 38 & 39
Superelevation (%): 4% max		AASHTO Very Low Volume p. 26
Intersection Design: Case B - Inters	ection with a controlled stop	MDT Approach Permit
Intersection Case Type:		per intersection approved by
Sight Triangle Distance - A)	- Has given an approach permit	per intersection approved by MDT
Easement Width: 60 ft proposed		Ravalli County Regs Table B-1
Roadway Width - Pavement: 18 ft	Shoulder: 2 ft	Ravalli County Regs Table B-1
Parking Provided / Allowed - Yes	No X	N/A
Bicycle/Pedestrian Facilities - Yes	No X	N/A
Reduced design speed of 20 mph per	Exhibit 5	

Proposed Design	Reference
Geometric - A	lignment
	preliminary design - pavement
Existing Sub-Grade Soil Type:	not yet designed
	preliminary design - pavement
Equivalent S/A Load:	not yet designed
	preliminary design - pavement
Resilient Value:	not yet designed
•	preliminary design - pavement
Sub-Base Course - Type: Depth:	not yet designed
	preliminary design - pavement
Base Course - Type: Depth:	not yet designed
	preliminary design - pavement
Surface Type-ACP X BST Other	not yet designed
	preliminary design - pavement
Surface Type-Design ACP Depth: 2"	not yet designed
	preliminary design - pavement
Structural Number:	not yet designed
Notes:	

Instructions

Complete all applicable sections; identify the specific source reference for the design (AASHTO "Green Book", AASHTO Low Volume, AASHTO Pavement Design, MUTCD, MPWSS) by section number. Identify any design exceptions and attach appropriate documentation. Attach any geotechnical, structural design and hydrology analysis.

Grading and drainage design plans are also required, which may be reviewed by the county's consulting engineer at the request of the County Planning Department. If included in this review process, such design plans as prepared for the Montana Department of Environmental Quality, or other regulatory agency, shall be submitted at the time of final design review. The design of any roadway structures (bridges) that are proposed shall also be submitted in appropriate format for review.

Attach any information that may be required to support the design proposal. The county's engineer will review for accuracy of calculations or engineering judgment. In submitting a proposal, the project designer shall certify as to the accuracy of the proposed design.

INCOMPLETE SUBMITTALS WILL NOT BE PROCESSED

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